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Mr. Mike Lichatowich
Niles Chemical, Inc.
1413 Clover Road
Mishawaka, Indiana 46545

Dear Mr. Lichatowich:

Re: Exempt Construction and Operation Status,
141-12484-000196

The application from Niles Chemical, Inc. received on July 17, 2000 has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-1.1-3, it has been determined that the following new paint manufacturing operation, to be located at 1413 Clover Road, Mishawaka, Indiana 46545, is classified as exempt from air pollution permit requirements:

(a) Two (2) natural gas-fired boilers, identified as BH-1 and BH-2 each will have a heat input capacity of 4.5 million British Thermal Units per hour (mmBtu/hr);

(b) Two (2) natural gas-fired heaters, identified as H-3 and H-4, each will have a heat input capacity of 0.25 mmBtu/hr; and

(c) Paint production process (see confidential TSD for detailed list of equipment).

The following conditions shall be applicable:

(1) Opacity Limitations [326 IAC 5-1-2]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute non-overlapping integrated averages for a continuos opacity monitor in a six (6) hour period.

(2) Particulate Matter Emissions (PM) Limit [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Sources of Indirect Heating), the PM emissions from the proposed two boilers, BH-1 and BH-2 shall each be limited to 0.6 lb/mmBtu.

(3) PM Emissions Limit from Process Operations [326 IAC 6-3]

Pursuant to 326 IAC 6-3-2, the PM emissions from the paint production process (pigment handling) is limited by this rule as follows:

Process/Facility ID	PM Emission Limit (lb/hr)
Tank mixers #6	0.551
Tank mixers #7	0.551
Tank mixers #8	0.551

This exemption is the first air approval issued to this source.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Management (OAM) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

APD

cc: File - St. Joseph County
St. Joseph County Health Department
Air Compliance - Rick Reynolds
Northern Regional Office
Permit Tracking - Janet Mobley
Technical Support and Modeling - Michele Boner
Compliance Data Section - Karen Nowak

Indiana Department of Environmental Management
Office of Air Management

Technical Support Document (TSD) for an Exemption

Source Background and Description

Source Name: Niles Chemical, Inc.
Source Location: 1413 Clover Road, Mishawaka, Indiana
County: St. Joseph
SIC Code: 2851
Exemption No.: 141-12484-00196
Permit Reviewer: Aida De Guzman

The Office of Air Management (OAM) has reviewed an application from Niles Chemical, Inc. relating to the construction and operation of a new plant that will manufacture paint. The plant will consists of the following equipment:

(a) Two (2) natural gas-fired boilers, identified as BH-1 and BH-2 each will have a heat input capacity of 4.5 million British Thermal Units per hour (mmBtu/hr);

(b) Two (2) natural gas-fired heaters, identified as H-3 and H-4, each will have a heat input capacity of 0.25 mmBtu/hr; and

(c) Paint production process (see confidential TSD for detailed list of equipment).

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
BH-1	Boiler	15	0.5	Unknown	200
BH-2	Boiler	15	0.5	Unknown	200
H-3	Unit Heater	15	0.5	Unknown	200
H-4	Unit Heater	15	0.5	Unknown	200

Recommendation

The staff recommends to the Commissioner that the construction and operation of this new plant be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on July 17, 2000, with additional information received via e-mail on September 11, 2000, and hard copies on September 15, 2000.

Emission Calculations

(a) Combustion Emissions: See Pages 1 of 2 and 2 of 2 TSD Appendix A for detailed calculations.

(b) Storage Tanks Emissions: See Tanks Program Spreadsheets for detailed calculations.

(c) Paint Manufacturing Process: See TSD confidential version

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential To Emit (tons/year)
PM	3.0
PM-10	3.2
SO_2	0.0
VOC	5.14
CO	3.5
NO_x	4.1

HAP's	Potential To Emit (tons/year)
Chrome	0.084
Lead	0.031
Methanol	0.42
TOTAL	0.535

Justification of Approval Level

(a) Pursuant to 326 IAC 2-1.1-3, the new plant will be exempted from the registration and permitting requirements under Article 326 IAC 2, because the plantwide potential to emit are each below the level that requires a registration and permit.

Limited Potential to Emit

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units.

	Limited Potential to Emit (tons/year)							
Process/facility	PM	PM-10	SO_2	VOC	CO	NO_X	Worst Combined HAPs	Worst Single HAP
Natural Gas Combustion (boilers, heaters)	0.1	0.3	0.0	0.2	3.5	4.1	0.0	0.0
Storage Tanks	0.0	0.0	0.0	0.14	0.0	0.0	0.0	0.0
Paint Production	0.0	0.0	0.0	4.8	0.0	0.0	0.535	0.42
Total Emissions	0.1	0.3	0.0	5.14	3.5	4.1	0.535	0.42

(a) This new source, which is one of the listed source categories (chemical process plant) is **not** a major stationary source because no attainment pollutant is emitted at a rate of 100 tons per year or greater. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

County Attainment Status

The source is located in St. Joseph County.

Pollutant	Status (attainment, maintenance attainment, or unclassifiable; severe, moderate, or marginal nonattainment)
PM-10	attainment
SO_2	attainment
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	not determined

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. St. Joseph County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) St. Joseph County has been classified as attainment or unclassifiable for all the other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)
This new source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:
(a) each criteria pollutant is less than 100 tons per year,
(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
(c) any combination of HAPs is less than 25 tons/year.

This is the first air approval issued to this source.

Federal Rule Applicability

(a) New Source Performance Standards (NSPS)

(1) 40 CFR, Part 60.110b, Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984. This rule applies to each storage vessels with a capacity greater than or equal to 40 cubic meters (10,567 gallons).

Proposed storage tanks #3, #4, and #5 are not subject to this rule, because each tank's capacity is less than 10,567 gallons.

(2) Proposed tanks #6, #7, #8 and #9 are not subject to this rule, because they will be used as process tanks and not storage tanks.

(3) 40 CFR, Part 60.40c, Subpart Dc - Standard of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, for which construction, modification, or reconstruction is commenced after June 9, 1989, and that have a maximum design heat input capacity of 100 mmBtu/hr or less, but greater than 10 mmBtu/hr.

The proposed two (2) natural gas-fired boilers, identified as BH-1 and BH-2 are not subject to this NSPS, because their heat input capacity are each less than 10 mmBtu/hr.

(4) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.

(b) National Emission Standards for Hazardous Air Pollutants (NESHAPs)
There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR art 63) applicable to this source.

State Rule Applicability - Entire Source

(a) 26 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

(1) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

(a) 326 IAC 8 (Volatile Organic Sources)
There are no rules in article 326 IAC 8 that will apply to this proposed paint manufacturing plant, because it is not among the processes listed in the rule.

(b) 326 IAC 6-3-2 (Process Operations)
Each tank mixer from the paint production process (pigment mixing) is limited by this rule as follows:

Process/Facility ID	PM Emission Limit (lb/hr)
Tank mixer #6	0.551
Tank mixer #7	0.551
Tank mixer #8	0.551

Tank mixers #6 and #7 will be in compliance with the rule since each PM emissions (0.05 ton/yr) are less than the limit. In addition, dust collector D-1 will be installed to collect the PM and be reused.

Tank mixer #8 will be in compliance using the dust collector D-1 to control the PM emissions.

(c) 326 IAC 6-2 (PM Emissions for Sources of Indirect Heating)

(1) The proposed two (2) natural gas-fired boilers, identified as BH-1 and BH-2 each with a heat input capacity of 4.5 million British Thermal Units per hour (mmBtu/hr) are subject to 326 IAC 6-2-4:

$Pt = 1.09/Q^{0.26}$
$= 0.62$ lb/mmBtu This limit shall in no case exceed 0.6 lb/mmBtu

Pt = PM limit in pounds per million British Thermal Units (lb/mmBtu)
Q = Total maximum capacity rating in mmBtu/hr
= 9.0 mmBtu/hr

Using natural gas for fuel:
1.9 lb/MMCF * 1 MMCF/1000 mmBtu = 0.0019 lb/mmBtu is less than the limit, therefore, each boiler is in compliance with the rule.

(2) The two (2) natural gas-fired heaters, identified as H-3 and H-4, each with a heat input capacity of 0.25 mmBtu/hr are not subject to 326 IAC 6-2, because they are not sources of indirect heating.

(3) 326 IAC 2-4.1-1 (New Source Toxics Control)
This rule applies to new construction, or reconstruction of a major source of hazardous air pollutants (HAP), as defined in 40 CFR 63.41, after July 27, 1997 This new plant is not subject to this rule, because it is not major for single HAP nor major for combined HAPs.

Conclusion

The construction and operation of this paint manufacturing plant shall be subject to the conditions of the attached **Exemption 141-12484-00196.**

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler

2 heaters @ 0.25 mmBtu/hr

Company Name: **Niles Chemical, Inc.**
Address City IN Zip: **1413 Clover Road, Mishawaka, Indiana 46545**
Exemption No.: **141-12484-009-00196**
Reviewer: **Aida De Guzman**
Date Application Received: **July 17, 2000**

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
0.5	4.4

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.0	0.0	0.0	0.2	0.0	0.2

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler

2 boilers @ 4.5 mmBtu/hr

Company Name: **Niles Chemical, Inc.**
Address City IN Zip: **1413 Clover Road, Mishawaka, Indiana 46545**
Exemption No.: **141-12484-009-00196**
Reviewer: **Aida De Guzman**
Date Application Received: **July 17, 2000**

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
9.0	78.8

Pollutant

	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.1	0.3	0.0	3.9	0.2	3.3

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).
See page 2 for HAPs emissions calculations.